

## ABSTRACT OF THE DISCLOSURE

A voter  $V_i$  encrypts his vote content  $v_i$  with a public key  $k_{PC}$  of a counter C, then concatenates the encrypted vote content  $x_i$  with a tag  $t_i$  to obtain a ballot  $z_i$ , then randomizes it with a random number  $r_i$  to create a preprocessed text  $e_i$ , and sends it and a signature  $s_i$  therefor to an election administrator A. The administrator A generates a blind signature  $d_i$  for the preprocessed text  $e_i$  and sends it back to the voter  $V_i$ . The voter  $V_i$  excludes the influence of the random number  $r_i$  from the blind signature  $d_i$  to obtain administrator signature  $y_i$ , and sends vote data  $\langle z_i, y_i \rangle$  to a counter C. The counter C verifies the validity of the administrator signature  $y_i$  and, if valid, generates and publishes a vote list containing the data  $\langle z_i, y_i \rangle$  to the voter  $V_i$ . The voter  $V_i$  checks the vote list to make sure that it contains the data  $\langle z_i, y_i \rangle$  with his tag  $t_i$  held in the ballot  $z_i$ . The counter C decrypts the encrypted vote content  $x_i$  in the ballot  $z_i$  to obtain the vote content  $v_i$ , and counts the number of votes polled for each candidate.